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ABSTRACT

The function of this paper is to initiate a discussion of the kinds of questions that should be asked when one considers what kind of environment is needed in the year 2000 to optimize human growth and development. More specifically, the paper focuses on the problems of the infant and young child in the 21st century urban environment. The essay is broken down into three categories: (1) the immediate environment (the infant's crib and bath facilities; toys; playrooms; etc.); (2) the orbital environment (the immediate environment in relation to all other needs--health services, schcols, etc.); and (3) the orbital environment as an extended family (a general category including the child's environment and its implications for the parents). Most of the essay deals with the immediate environment. Several specific problems of infants and young children in urban centers in the future are brought up. It is pointed out that technology often outstrips the ability to ask relevant questions from it. (Author/JW)

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RESEARCH MEMORANDUM

INFANCY AND EARLY CHILDHOOD IN THE URBAN ENVIRONMENT: PROBLEMS FOR THE 21st CENTURY

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INFANCY AND EARLY CHILDHOOD IN THE URBAN ENVIRONMENT: PROBLEMS FOR THE 21st CENTURY

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It is as foolish to talk about cities without considering their inhabitants as it is to talk about the mind without the body. For too long, architecture, sociology, education and psychology, for example, have existed as separate entities, each trying to solve problems clearly too interrelated to have meaning independent of the total organism they study. In this context the oriental metaphysic can be hortatory to the occidental scientific point of view. An important principle of the Eastern metaphysic is the understanding that all elements of the world exist in dependent interrelationship with one another. Thus, organisms, events and processes must be viewed in context. Man, his needs and environment are intimately interwoven and the city of tomorrow must be prepared to take this into account.

The function of this paper is to initiate a discussion of the kinds of questions that should be asked when one considers what kind of environment is needed in the year 2000 to optimize human growth and development. More specifically, we shall focus on (as well as we can hope to visualize) the problems of the infant and young child in the 21st century urban environment. A simple classification system offers itself and such a system can be considered in the following way. (1) The Immediate Environment: (a) the infant's and child's crib and bath facilities; (b) toys and playthings; and (c) environmental space such as playrooms, nurseries, etc.; (2) the Orbital Environment: the Immediate Enviroment in relationship to all other needs, for example, health services, schools, babysitting,

parks etc.; and (3) the Orbital Environment as an Extended Family: a general category including the child's environment and its implications for the parents, for example, working mothers and the care of children, or adult education and babysitting for infants. Because of my own area of specialization I shall spend more time on the Immediate Environment. However, this does not reflect any ordering of importance.

1. Immediate Environment

Can we specify exactly what is meant by the infant's environment? Unfortunately, too little field work on this problem has been conducted; however, we can tentatively specify some aspects with relative confidence. Within this category one could include such objects as (a) the furniture into or on which the infant is placed, i.e., cribs and cradles; (b) the toileting facilities such as bathing equipment; (c) toys the child plays with; and (d) the room in which the infant spends most of his time. It is of course obvious that the most important environmental aspect is people, the parents and siblings. While recognizing their importance, we will postpone a discussion of them for the time being. Each one of these aspects of the infant's immediate environment presents problems and implications which need to be explored.

Crib. The design of the infant crib in the U.S., for example, has remained unchanged since its inception. What are the functions of a crib for the child and parent? The crib is a place where a child sleeps and plays--often alone--so it has to be a soft place to sleep in; it has to provide certain levels of stimulation while enabling the child to see into the space beyond, provide space in which the child can move freely

about, and protect the child as it moves. The crib is now designed to serve few of these needs. It offers little stimulation, is a monotonous and uninteresting spatial area for exploring, too restrictive in size, and generally not interesting enough for what we know now to be the high level of information processing existing even at birth. Thus, the crib is boring in terms of its spatial dimensions: it is uninteresting in terms of the stimulation it provides or allows the child or infant to obtain, and is moreover physically taxing upon the caretaker. This last point should be briefly stressed, for one function of the crib is easy access to the child. Current design fails this point as well. As the child grows and becomes heavier and taller, it is necessary to lower the mattress of the crib, therefore increasing the height over which the mother must bend and lift the child. We could not possibly construct a more difficult weight lifting task if we had intended to.

Bath. The crib, of course, is not the only aspect of the infant's immediate environment that needs changing. Other examples are dressing tables and bathing facilities for the child. Observation of what is commercially available fills one with wonderment at the various torturous devices prepared for both child and mother. They are often inappropriate for the height of the mother, too expensive for other than the affluent middle class, and quickly antidated as the child grows, so that their utility for the first few years of life is highly restricted. For example, consider the child's bath. How are we to bathe a very young child? It is certainly not a simple act. Young mothers confronted by their first child and the bath are horrified at the possibility that the child may slip

from their soapy hands into the water and drown. Moreover, there is no way of safely leaving the child to attend to another urgent need. These are common problems, yet we have given no thought to them in designing a bath. It is clear that bathroom function and design is generally in a sorry state of neglect, be it infant, child or adult facilities. The technology is available and it becomes increasingly clear that the 21st century must take these problems into serious consideration.

Toys. Probably the next most important consideration in the infant's immediate environment is the class of environmental manipulanda we call toys. For the infant and young child, toys constitute tools of learning. Recently, there has been a growing interest in infancy by toy manufacturers in the United States and a large number of new toys have been produced which vary the tactile, auditory and visual environment of the child. These have been produced under the press of the knowledge that a varied stimulation in these modalities is important for the infant. More important, however, is the prospect of a successful commercial enterprise. Because of this, manufacturers have sponsored little scientific or systematic development of these new toys. This lack of scientific approach has led to at least one enlightening discovery. A toy manufacturer has produced a whole line of aesthetically beautiful toys. The toys are made in simple forms out of natural woods with rich grains, a very beautiful product. However when one examines the aesthetic behind their creation one finds that it is not the aesthetic of the infant or young child. Indeed, study reveals children like varied and bright colors with intricate tiny designs. The toy manufacturer in this instance has the aesthetic of the adult rather than the child in mind. It is, after all, the parent who buys the toy for

the child. Such blundering emphasizes the need for careful and meaningful research into children's needs and preferences. Aesthetic considerations are, of course, only one consideration in toy construction. Versatility, responsiveness and intensity are just three other characteristics which should be considered.

Room and Space. Toys are a unit of the environment the young child can manipulate, while his room is a unit of the environment within which he maneuvers. Even lying passively in an infant seat, he is still able visually to scan and manipulate space. Consideration of both qualitative and quantitative space, therefore, is most necessary in any discussion of environment. However, is it reasonable to discuss a child's space needs as separate from those of an adult? I think all that would be necessary to arbitrate the matter would be either to lie on the ground or to kneel and look around. The change in perspective available in these positions is amazing and what we would see differs markedly from what we see standing at our full height. The world the adult constructs is the world he looks down on, while the child's world is the world he looks up at, and there are important differences between the two. An example of this type of adult chauvinism presents itself in the practice of painting the upper sides of objects, furniture and bookshelves, leaving the underside unpainted. Adults decorate what they can see.

Historically, architectural and constructional demands necessitated building square rooms with level floors and flat ceilings. However, is this the most ideal of spaces? It seems possible to consider the possibilities of nonsquared environments with large and small spaces, corners, curves and a variety of textures, angles and shapes. Prefabricated panels

might alter ceiling and wall shapes, while uneven floors could be produced by carpeting. With the elimination of the right angle environment any type of shape is possible. Moreover, variations could be produced at will. The child's room could undergo space variations as a function of individual satiation rate and developmental sequence.

As the child develops over the first year of life, we become aware of the change from a passive recipient of stimulation to an active generator of new stimulation. This takes place as he learns to negotiate space--as he learns to creep, crawl and finally walk. Is it possible or desirable to produce environmental objects which enable him to move through his space before he is physically capable? The possibility suggests an intriguing problem from both the point of view of the immediate environment and development, that is, is it possible to foster an accelerated developmental sequence by such environmental devices? Is such acceleration desirable? While only further research can suggest answers, these problems are most interesting and important to pose.

Having now discussed, albeit briefly, the infant's immediate environment, let us turn to viewing this environment in context of larger units.

2. Orbital Environment

The second classification category is the orbital environment by which I mean the Immediate Environment as it interacts with the larger environment of the community and city. In the discussion to follow it will soon be apparent that it is impossible to solve one set of problems without the other. Assuming we could utilize what is known about child development to construct an ideal Immediate Environment, our goal of

optimizing human growth would remain frustrated if we were unable to alter the Orbital Environment. Consider the case of preventive or therapeutic medicine. For those of us living in the United States, it remains for the 21st century to provide all of our citizens with medical attention under a public, nonprofit medical system. Assume that such a system existed in the United States. Where should these medical services be located with respect to the child? Vast medical centers as appendages to universities may be excellent for research or long term diagnostic problems, but for the everyday therapeutic and preventive medicine that infants and young children need, it is clearly not adequate. Moreover, the public transportation systems now available in large metropolitan areas (at least in the United States) do not favor mothers with small children who need to traverse the city to seek this medical care. The whole issue of public transportation is worth discussing, for it is clear that not all services in the community can be placed within immediate access for all people. An efficient transportation system should provide comfortable access to all public facilities, and medical services in particular.

Medical facilities are just one example. The same problem exists for any other service or function that needs to take place outside the Immediate Environment. It is clear that the Orbital Environment must be constructed in such a manner so that the parent can make optimal use of it for her child. This intimately involves the problems of transportation and becomes an ecological problem, namely, how to place key Orbital Environments so that they can be optimally utilized. The concept of the planned community, the "New Towns" that have been designed in the last 20 years,

provides a clue. Could we not construct these planned communities within the urban environment? One way to approximate this would be to redesign the urban environment into a series of smaller communities. Within each complex, stores and facilities for everyday living should be available, but more important we should consider establishing a "services building" located in the center of the building complex from which the housing units radiate. This kind of "services building" would have multiple functions, some of which would have direct bearing on the life of the young child. Using the example of medical facilities, these buildings should have adequate medical centers in which all but the most complex kinds of medical problems could be solved. In this way, mothers would not have to take their children very far to receive the medical attention they need. Moreover, such clinics might have facilities for day and night care, and emergency treatment facilities which could subsequently refer all acute medical problems to more specialized facilities.

Beyond medical care, the service building should provide babysitting facilities where the child might be left for either short or long periods on a regular or impromptu basis. The facility might be run as a cooperative by the parents themselves as well as by professionals. In addition, one should consider an early preschool. It is clear that the more we learn about intellectual, perceptual and social development, the greater the possibility of developing these skills at earlier ages. Preschools might be established for teaching functions too complex and involved for parents to initiate at home.

The number of functions to be found in the Orbital Environment is exhaustive and so short a discussion cannot be complete. It is obvious

that the relationship between the young child and the functions found in the Orbital Environment require careful rethinking. Whether or not we accept the notion of small urban units, it is crucial that orbital functions be made available and accessible in the future, particularly in light of the increased demands on them which will be presented by the increased population pressure.

3. Orbital Environment as an Extended Family

This category includes those kinds of issues not readily classified in Immediate and Orbital Environments. Specifically, we wish to discuss the implication for both parent and child--but especially the parent--in having a functional and efficient Orbital Environment. Such a system might allow change in the nature of the family structure. In the United States, at least, and generally in large European urban areas, the family unit has shrunk to its smallest unit: mother, father and children. No longer are there the large extended family units which housed grandparents, uncles, aunts, etc. The effect of this change on the relationship of parent to child is marked. It means a large reduction in the ratio of adults to children, and greater dependence on fewer people for the child. The small ratio in itself should affect the quality of the relationships between parent and child. Moreover, by reducing the number of adults, those that are present are more needed in physical as well as emotional terms. The quality of the life of the parent, the relationship of the parents to one another, is in turn affected.

Efficient use of the Orbital Environment may include incorporating its functions into those of the contemporary family unit. In this way,

the Orbital Environment could assume some of the functions previously held by members of the family. Today, a mother who wishes to work and at the same time nurse her child asks the impossible within the present family structure in the urban environment. Parents who are interested in furthering their education to improve their homemaking or parental skills find it most difficult to do so, given the present social structures and burden of taking care of the children. Indeed, how can one be a working mother and have very young children at the same time? Solutions may be found properly structuring the Orbital Environment. By incorporating those services usually found in an extended family, the Orbital Environment may be able to relieve the mother of certain functions, while at the same time enabling her to perform others. An example is the mother who wants to devote herself to a single child, or newborn child, and is able to place her preschool children in the Orbital Environment for several hours a day.

By discussing the Orbital Environment as an extended family, we do not mean to discharge the functions of the mother. Rather, we view it as a community helper, assuming functions when needed. Moreover, by utilizing the members of the community in a cooperative unit, the services of older siblings, mothers, unmarried persons can all be used in the service needs. In this way, community control and at the same time a humanistic atmosphere can be maintained. This extended family notion does not differ from what upper middle class and upper class mothers are able to provide for themselves today in our society. However, in the city of the year 2000 we hope to be able to produce a more egalitarian society in which all citizens are able to utilize these services.

The preceding remarks were intended to alert you to the special considerations of the needs of infants and young children in the city of the year 2000. I have suggested several specific problems and examples. However, they are by no means exhaustive. It is clear that our technology often rushes along outstripping our ability to ask the relevant questions from it. It is equally clear that we must start asking these questions. It was the function of the paper to raise some questions and I hope we have been successful.